

IN THE CLAIMS:

The following listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently amended) A computer-implemented method for storing execution progress of a test executive sequence, the method comprising:

executing the test executive sequence on a computer system;

wherein the test executive sequence comprises a plurality of steps, wherein each step in at least a subset of the steps calls an external code module;

wherein said executing the test executive sequence comprises executing the test executive sequence under control of a test executive engine, wherein the test executive engine is operable to execute each of the steps in the plurality of steps according to an order of execution specified by the test executive sequence;

wherein for each step in the at least a subset of the steps, executing the step comprises the test executive engine invoking execution of the external code module called by the step;

wherein the test executive engine is further operable to perform ~~performing~~ one or more snapshots of the execution of the test executive sequence, wherein each snapshot is performed at a particular ~~point~~ step during execution of the test executive sequence;

wherein, for each snapshot, performing the snapshot comprises the test executive engine storing information usable to re-start execution of the test executive sequence from the ~~point~~ step at which the snapshot ~~was~~ is performed.

2. (Currently amended) The method of claim 1, further comprising:

stopping execution of the test executive sequence after a particular snapshot is performed;

re-starting execution of the test executive sequence from the ~~point~~ step at which the particular snapshot was performed;

wherein said re-starting execution of the test executive sequence comprises using the stored information of the snapshot to restore an execution environment of the

computer system so that the test executive sequence can execute correctly from the ~~point~~ step at which the particular snapshot was performed.

3. (Original) The method of claim 2,

wherein said restoring the execution environment of the computer system comprises using the stored information of the snapshot to re-create a stack frame of the computer system.

4. (Currently amended) The method of claim 3,

wherein said re-creating the stack frame comprises placing data on the stack frame so that the stack frame is in a state as if execution of the test executive sequence had run to the ~~point~~ step at which the particular snapshot was performed.

5. (Original) The method of claim 2,

wherein said restoring the execution environment of the computer system comprises making the execution environment of the computer system substantially the same as when the particular snapshot was performed.

6. (Original) The method of claim 1,

wherein said storing the information comprises persistently storing the information.

7. (Original) The method of claim 1,

wherein said storing information comprises storing one or more of:

a variable value;

a property value.

8. (Cancelled)

9. (Original) The method of claim 1, further comprising:

receiving user input specifying criteria for when to perform the snapshots.

10. (Original) The method of claim 1,
wherein the snapshots are performed periodically according to a particular time interval.

11. (Currently amended) A memory medium which comprises program instructions to implement storing execution progress of a test executive sequence, wherein the memory medium is computer-readable, and wherein the instructions are executable by a processor to:

execute the test executive sequence on a computer system;

wherein the test executive sequence comprises a plurality of steps, wherein each step in at least a subset of the steps calls an external code module;

wherein said executing the test executive sequence comprises executing the test executive sequence under control of a test executive engine, wherein the test executive engine is operable to execute each of the steps in the plurality of steps according to an order of execution specified by the test executive sequence;

wherein for each step in the at least a subset of the steps, executing the step comprises the test executive engine invoking execution of the external code module called by the step;

perform one or more snapshots of the execution of the test executive sequence, wherein each snapshot is performed at a particular ~~point~~ step during execution of the test executive sequence;

wherein, for each snapshot, performing the snapshot comprises storing information usable to re-start execution of the test executive sequence from the ~~point~~ step at which the snapshot ~~was~~ is performed.

12. (Currently amended) The memory medium of claim 11, wherein the program instructions are further executable by the processor to:

stop execution of the test executive sequence after a particular snapshot is performed;

re-start execution of the test executive sequence from the point at which the particular snapshot was performed;

wherein said re-starting execution of the test executive sequence comprises using the stored information of the snapshot to restore an execution environment of the computer system so that the test executive sequence can execute correctly from the point step at which the particular snapshot was performed.

13. (Original) The memory medium of claim 12,

wherein said restoring the execution environment of the computer system comprises using the stored information of the snapshot to re-create a stack frame of the computer system.

14. (Original) The memory medium of claim 11,

wherein said storing the information comprises persistently storing the information.

15. (Original) The memory medium of claim 11,

wherein said storing information comprises storing one or more of:

a variable value;

a property value.

16. (Cancelled)

17. (Original) The memory medium of claim 11,

wherein the snapshots are performed periodically according to a particular time interval.

18. (Currently amended) A system for executing a test executive sequence, the system comprising:

a processor;

a first memory medium storing a test executive sequence, wherein the test executive sequence comprises a plurality of steps, wherein each step in at least a subset of the steps calls an external code module;

wherein the processor is operable to execute the test executive sequence under control of a test executive engine, wherein the test executive engine is operable to execute each of the steps in the plurality of steps according to an order of execution specified by the test executive sequence, wherein for each step in the at least a subset of the steps, executing the step comprises the test executive engine invoking execution of the external code module called by the step;

wherein the processor is operable to execute the test executive engine to perform one or more snapshots of the execution of the test executive sequence, wherein each snapshot is performed at a particular point step during execution of the test executive sequence;

wherein, for each snapshot, performing the snapshot comprises the test executive engine storing information usable to re-start execution of the test executive sequence from the point step at which the snapshot was is performed.

19. (Original) The system of claim 18, further comprising:

a second memory medium providing a persistent storage means;

wherein said storing information comprises persistently storing the information on the second memory medium.

20. (Currently amended) A computer-implemented method for storing execution progress of a test executive sequence hierarchy, the method comprising:

executing the test executive sequence hierarchy on a computer system, wherein the test executive sequence hierarchy includes a plurality of test executive sequences related to each other according to a hierarchical relationship, wherein each of the test executive sequences includes a plurality of steps;

performing one or more snapshots of the execution of the test executive sequence hierarchy, wherein each snapshot is performed at a particular point during execution of the test executive sequence hierarchy;

wherein, for each snapshot, performing the snapshot comprises storing information usable to re-start execution of the test executive sequence hierarchy from the point at which the snapshot was performed.

21. (New) The method of claim 1,

wherein, for each snapshot, performing the snapshot comprises the test executive engine storing information representing execution results of steps in the test executive sequence executed prior to the step at which the snapshot is performed.

22. (New) The method of claim 21,

wherein said storing information representing execution results of steps in the test executive sequence executed prior to the step at which the snapshot is performed comprises storing information representing execution results of external code modules called by steps executed prior to the step at which the snapshot is performed.

23. (New) The method of claim 2,

wherein said restoring the execution environment of the computer system comprises using the stored information of the snapshot to restore results of steps in the test executive sequence executed prior to the step at which the particular snapshot was performed.

24. (New) The method of claim 23,

wherein said restoring results of steps in the test executive sequence executed prior to the step at which the particular snapshot was performed comprises restoring execution results of external code modules called by steps executed prior to the step at which the particular snapshot was performed.

25. (New) The method of claim 2,

wherein said stopping execution of the test executive sequence after the particular snapshot is performed comprises stopping execution of the test executive sequence in response to a failure condition.

26. (New) The method of claim 2,

wherein said stopping execution of the test executive sequence after the particular snapshot is performed comprises the test executive engine stopping execution of the test executive sequence in response to user input requesting to stop execution of the test executive sequence;

wherein said re-starting execution of the test executive sequence from the step at which the particular snapshot was performed comprises the test executive engine re-starting execution of the test executive sequence in response to user input requesting to re-start execution of the test executive sequence;

wherein the stored information of the particular snapshot enables the user to temporarily stop execution of the test executive sequence and then re-start execution of the test executive sequence without the entire test executive sequence being re-executed from the beginning.

27. (New) The method of claim 26,

wherein the stored information of the particular snapshot aids a user in debugging the test executive sequence by enabling the user to temporarily stop execution of the test executive sequence and then re-start execution of the test executive sequence without the entire test executive sequence being re-executed from the beginning.

28. (New) The method of claim 2, further comprising:

receiving user input selecting the particular snapshot from a plurality of snapshots;

wherein execution of the test executive sequence is re-started from the step at which the particular snapshot was performed in response to the user input selecting the particular snapshot.

29. (New) The method of claim 28, further comprising:

displaying a graphical user interface that visually indicates the plurality of snapshots;

wherein said receiving user input selecting the particular snapshot from the plurality of snapshots comprises receiving user input to the graphical user interface selecting the particular snapshot from the plurality of visually indicated snapshots.

30. (New) The method of claim 1,

wherein the plurality of steps in the test executive sequence includes a first particular step, wherein the first particular step is operable to cause the test executive engine to perform a snapshot when the first particular step is executed by the test executive engine;

wherein said test executive engine executing each of the steps in the plurality of steps comprises the test executive engine executing the first particular step;

wherein the test executive engine performs a snapshot directly in response to executing the first particular step.

31. (New) The method of claim 1,

wherein said test executive engine performing one or more snapshots of the execution of the test executive sequence comprises the test executive engine performing a first particular snapshot;

wherein the first particular snapshot is not performed directly in response to the test executive engine executing a step in the test executive sequence.

32. (New) The method of claim 1,

wherein the plurality of steps in the test executive sequence are operable to control a hardware device to test a unit under test (UUT);

wherein said test executive engine executing each of the steps in the plurality of steps comprises the test executive engine executing a first subset of the steps, wherein one or more steps in the first subset of steps are operable to set a hardware device to a first state;

wherein the test executive engine performs a first particular snapshot at a first particular step, wherein the first particular step is executed after the first subset of steps;

wherein the method further comprises:

stopping execution of the test executive sequence after the first particular snapshot is performed; and

re-starting execution of the test executive sequence from the first particular step at which the first particular snapshot was performed;

wherein said re-starting execution of the test executive sequence comprises re-executing one or more, but not all, of the steps in the first subset of steps that were executed before the first particular snapshot was performed, wherein the one or more steps are re-executed to reset the hardware device to the first state;

wherein the first particular snapshot enables execution of the test executive sequence to be re-started from the first particular step without re-executing all of the steps in the first subset of steps that were executed before the first particular snapshot was performed.

33. (New) The method of claim 32,

wherein the test executive sequence is organized in step groups;

wherein said re-executing one or more, but not all, of the steps in the first subset of steps that were executed before the first particular snapshot was performed comprises re-executing steps of a first step group, wherein steps of the first step group comprise steps operable to set the hardware device to the first state.

34. (New) The method of claim 1,

wherein said test executive engine executing each of the steps in the plurality of steps comprises the test executive engine executing a first subset of the steps;

wherein the test executive engine performs a first particular snapshot at a first particular step, wherein the first particular step is executed after the first subset of steps;

wherein the method further comprises:

stopping execution of the test executive sequence after the first particular snapshot is performed; and

re-starting execution of the test executive sequence from the first particular step at which the first particular snapshot was performed;

wherein said re-starting execution of the test executive sequence comprises re-executing one or more, but not all, of the steps in the first subset of steps that were executed before the first particular snapshot was performed;

wherein the first particular snapshot enables execution of the test executive sequence to be re-started from the first particular step without re-executing all of the steps in the first subset of steps that were executed before the first particular snapshot was performed.

35. (New) The method of claim 1,

wherein said performing one or more snapshots of the execution of the test executive sequence comprises performing a first particular snapshot;

wherein said performing the first particular snapshot comprises performing the first particular snapshot in response to evaluating one or more values set by execution of the test executive sequence.

36. (New) The method of claim 35,

wherein said performing the first particular snapshot comprises performing the first particular snapshot in response to determining that a Boolean condition is True, wherein the Boolean condition is based on one or more values set by execution of the test executive sequence.